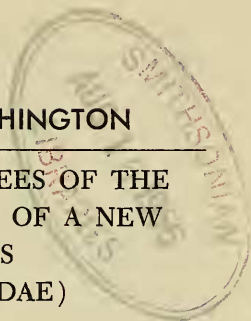


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PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON



STUDIES ON NORTH AMERICAN BEES OF THE
GENUS *HYLAEUS* 2. DESCRIPTION OF A NEW
SUBGENUS AND SPECIES
(HYMENOPTERA: COLLETIDAE)

BY ROY R. SNELLING

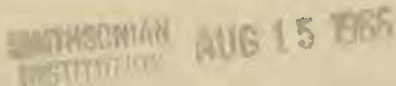
Los Angeles County Museum, Los Angeles, California

The following new subgenus and species are described at this time in order that the names might be available for a forthcoming paper on the subgenera of *Hylaeus* occurring in the Nearctic Region. For the loan of the material recorded below I am indebted to the following individuals: H. E. Evans, Museum of Comparative Zoology (MCZ); P. D. Hurd, Jr., California Insect Survey, University of California, Berkeley (CIS); K. V. Krombein, United States National Museum (USNM); A. T. McClay, University of California at Davis (UCD); C. D. Michener, University of Kansas (UK); J. G. Rozen, Jr., American Museum of Natural History (AMNH); F. G. Werner, University of Arizona (UA).

Hylaeus, Subgenus **Prosopella** Snelling, new subgenus

Although superficially similar to *Paraprosopis* both sexes are very different from that and all other Nearctic subgenera. From *Paraprosopis* the males differ in the entire and bare, rather than bifid and hairy, ninth ventrite. The ninth ventrite is unique among North American *Hylaeus* in that the apical process is sharply bent downward at an angle about 45°. The shape of the eighth ventrite strongly suggests that of the Neotropical subgenus *Hylaeopsis*, which *Prosopella* further resembles in the extremely coarse punctures of the head and thorax. The female most closely resembles those of *Paraprosopis* but differs by the very coarse punctation and the transversely rugose basal area of the propodeum.

Head slightly longer than broad in both sexes; male first flagellar segment broader than long, shorter than pedicel, about half as long as second flagellar segment; female facial foveae hardly separated from eye margins above; supraclypeal area of male a little more than half



as long as clypeus (area of supraclypeal mark less than half as long as clypeus); thorax very coarsely punctate; lateral and oblique propodeal carinae absent; basal area of female propodeum with rugae largely transverse; ventrite VII of male deeply emarginate medially; ventrite VIII with apical lobes small, neither pectinate nor laterally emarginate, with a few hairs apico-laterally; ventrite IX with spiculum subequal to length of disc, apical process longer, its apex broadened, apical process reflexed downward at angle of about 45°, apex bare; gonoforceps slightly broadened basally, blunt apically, with a few long simple hairs apically.

Etymology: *Prosopella* diminutive of *Prosopis*, a subgenus of *Hylaeus*, gender feminine.

Type species of subgenus: *Hylaeus (Prosopella) hurdi* Snelling, new species.

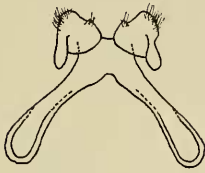
***Hylaeus (Prosopella) hurdi* Snelling, new species**

Fig. 1

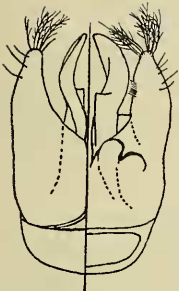
Superficially the female resembles *H. wootoni* (Cockerell), but it is easily separated from this, and all other Nearctic *Hylaeus* by the combination of maculate clypeus, extremely coarse thoracic punctures and transversely rugulose basal propodeal area. The male may be recognized among the superficially similar small species by its distinctly and coarsely punctate clypeus, coarsely punctate thorax, transversely rugulose basal propodeal area and details of ventrites VIII and IX.

Male (composite description): Integument black, except for dull yellow maculae as follows: mandibles, except ferruginous apices; labrum; clypeus; supraclypeal spot; paraocular areas, extending narrowly along inner orbits to level a little below midpoint between antennal sockets and median ocellus (Fig. 1A); medially interrupted stripe on pronotal collar; pronotal tubercles largely; spot on tegulae; small to minute apical spot on all femora; fore tibiae, except irregular brownish blotch on posterior surface; basal one-fourth and small apical spot on middle tibiae; basal one-third and small apical spot on hind tibiae; all basitarsi. All medio- and distitarsi ferruginous yellow. Tarsal claws ferruginous apically, yellow basally as are tibial spurs. Wings clear hyaline, veins and stigma brownish. Pubescence whitish, sparse, except on underside of head where it is relatively long and abundant.

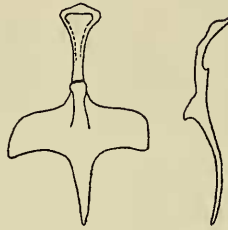
Head: UFD $0.79 \times$ FL; LFD $0.58 \times$ UFD; OCD $1.13 \times$ TFD; clypeus slightly wider basally than distance between laterobasal angle and eye margin; distance between antennal sockets almost twice a socket diameter, the latter about equal to distance from socket to eye margin; clypeus and supraclypeal area dull, densely tessellate, with large, conspicuous punctures separated by about a puncture diameter; maculate lateral areas a little shinier, punctation as on clypeus; immaculate areas dull, densely, coarsely punctate; genae dull, densely punctate, punctures smaller than those of vertex, more obscure. First flagellar



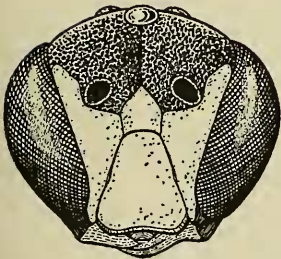
A



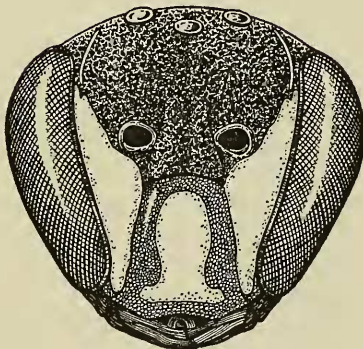
B



C



D



E

FIG. 1. *Hylaeus (Prosopella) hurdi*, new species. A, ventrite viii of male; B, genitalia of male, left half dorsal aspect, right half ventral aspect; C, ventrite ix of male, dorsal and lateral aspects; D, face, male; E, face, female. C and D by Evie Templeton, Los Angeles County Museum Exhibitions Staff.

segment subequal to pedicel, minimum length a little more than half its breadth, maximum length almost equal to minimum length of second.

Thorax: Outer margin of fore coxa slightly convex to straight; mesopleural punctures very coarse, close, interstices densely tessellate, slightly shining; mesoscutal punctures coarser, subcontiguous, interstices less shining than those of mesopleurae; mesoscutellar punctures equal to those of mesoscutum, more separated, interstices shinier; metanotum dull, densely tessellate, with coarse, close, deep punctures; basal area of propodeum rugulose, the rugae variable, but usually distinctly transverse; remainder of propodeum, including posterior face, densely, distinctly punctate; oblique carina absent, lateral carina obliterated above lower one-fifth.

Abdomen: Tergite I shining, punctures fine, separated by a puncture diameter or a little more; tergite II duller, more distinctly tessellate, with finer, more obscure punctures, mostly separated by more than a puncture diameter; tergites III-VI similar to II, with piliferous punctures a little larger, but more obscure than those of II; ventrites VIII, IX and genitalia as in Fig. 1 C-E.

Measurements: Body length (front of vertex to apex of second tergite), 3.2 to 4.0 mm; forewing length, 2.9 to 3.6 mm.

Female: Integument black, except dull yellow as follows: elongate median mark on clypeus; irregular supraclypeal spot (absent in some paratypes); paraocular area, extending along inner eye margin to level midway between antennal sockets and median ocellus (Fig. 1B); medially interrupted pronotal stripe; pronotal tubercles largely; spot on tegulae; basal one-third of fore and hind tibiae; basal one-fourth of mid tibiae; tibial spurs. Wings as in male. Pubescence light, sparse.

Head: UFD $0.81 \times$ FL; LFD $0.65 \times$ UFD; OCD $0.92 \times$ TFD; clypeus a little wider basally than distance from latero-basal angle to inner eye margin; distance between antennal sockets slightly greater than a socket diameter, the latter equal to distance between sockets and eye margin; clypeus and maculate areas dull, very densely tessellate, with scattered shallow large punctures; immaculate areas a little shinier, subrugulose from coarse punctures; genae slightly shining, with punctures a little finer than those of frons, more separated; facial foveae above hardly separated from eyes.

Thorax: Mesopleurae slightly shining, punctures very coarse, subcontiguous to about one-half a puncture diameter apart; mesoscutal punctures coarser, subcontiguous; mesoscutellar punctures equal to those of mesoscutum, slightly more separated; metanotal punctures equal to those of mesoscutum, interstices dull, very densely tessellate; basal propodeal area distinctly transversely rugulose in most specimens, the rugulae extending onto the vertical face; remainder of propodeum distinctly, closely punctate; lateral carina absent above lower one-fourth or less; oblique carina absent.

Abdomen: Tergite I distinctly tessellate, slightly shining, with fine

punctures separated by about a puncture diameter; tergite II similar, but punctures much finer; remaining tergites similar to II.

Measurements: Body length (front of vertex to apex of second tergite), 3.5 to 4.8 mm; forewing, length, 3.2 to 4.5 mm.

Holotype male and allotype female (Los Angeles County Museum), Southwest Research Station, Chiricahua Mts., Arizona, 3 September 1959 (G. I. Stage). Paratypes. ARIZONA: 2 ♀♀, same data as allotype (LACM); 1 ♂, Rustler's Park, Chiricahua Mts., 13 August 1958 (P. D. Hurd; CIS); 1 ♀, same locality as allotype, 16 July 1956 (C. and M. Cazier; AMNH), on *Melilotus alba*; 1 ♀, Portal, 2 mi. NE, 1 August 1959 (M. Statham; AMNH), on *Baccharis*; 3 ♀♀. Globe, July 193? (F. H. Parker; MCZ); 1 ♀, Portal, 5 mi. W, 13 August 1958 (C. G. Moore; UCD); 3 ♂♂, 2 ♀♀, Santa Catalina Mts., 14 July 1961 (M. L. Noller), on *Ceanothus*; 2 ♀♀, same locality, 18 July 1955 (G. D. Butler and F. G. Werner), on *C. greggii*; 3 ♀♀, same locality, 14 August 1954 (G. Bohart and G. Butler); 1 ♀, same locality, 25 August 1954 (G. D. Butler); 1 ♂, west slope Patagonia Mts., 9 August 1956 (F. G. Werner and G. D. Butler); 1 ♂, 4 ♀♀, Ramsey Canyon, Huachuca Mts., 12 July 1955 (G. D. Butler and F. G. Werner), on *M. alba*; 11 ♂♂, Graham Mts., 8 July 1955 (G. D. Butler and F. G. Werner), on *Ceanothus*; 1 ♂, 9 ♀♀, same locality, 9 August 1955 (Butler and Noon; all UA), 1 ♀ on *Ceanothus*, ♂ on *Verbesina encelioides*; 1 ♂, Flagstaff, 7-9 July 1959 (K. V. Krombein; USNM); 2 ♀♀, Santa Rita Mts., VII (F. H. Snow); 2 ♂♂, Chiricahua Mts., 21 July 1950 (J. G. Rozen); 1 ♂, same locality, 20 July 1950 (J. Arnold); 15 ♂♂, 2 ♀♀, Santa Catalina Mts., 14 July 1950 (H. O. Wright); 16 ♂♂, 4 ♀♀, same data, except (R. H. Beamer); 17 ♂♂, 12 ♀♀, same data, except (L. D. Beamer); 10 ♂♂, 5 ♀♀, same locality, 15 July 1950 (L. D. Beamer); 3 ♂♂, 2 ♀♀, same locality, 16 July 1950 (L. D. Beamer); 1 ♂, 1 ♀, same data, except (R. H. Beamer; all UK). MEXICO: 1 ♀, approx. 18 mi. S Creel, CHIHUAHUA, no date (R. M. Straw, No. 1910; LACM), on *Penstemon campanulatus*. Paratypes in the collections of the University of California at Davis and Berkeley, University of Arizona, University of Kansas, the American Museum of Natural History, United States National Museum, Museum of Comparative Zoology, the Los Angeles County Museum, and Mr. G. I. Stage.

I take great pleasure in naming this species for Dr. Paul D. Hurd, Jr., in grateful recognition of his continued assistance and encouragement during the course of this study.